STACKY

The ultimate standing, stacking and flying frame for video projectors

Installation Manual

1) STACKY and its components Page 2
2) Projector Installation Page 3
3) Adjustment of STACKY Page 5
4) Warning Statements Page 7
5) Warranty and disclaimer Page 7
6) Dimensions and weight Page 8
7) Customer support, spare parts Page 8
8) STACKY supplies Page 8

1) STACKY and its components

Parts List:

8 pcs flat washers M6x24x2mm
1 set of screws M4: 4 pcs each 16, 20, 25mm
1 set of screws M5: 4 pcs each 16, 20, 25mm
1 set of screws M6: 4 pcs each 16, 20, 25mm
4 pcs carriage bolts, 6x20
24 pcs flat washers M6/14mm
4 pcs nuts M6, self-locking
4 pcs long-hole rails

Base Frame:

The Frame is made of heavy-duty, coated aluminium, is light and sturdy. No care is necessary and the frame is corrosion-resistant.
STACKY is designed and approved for projectors up to 15 kg. The installation of projectors weighing more than 15 kg is prohibited and will void the warranty!

Adjustment Feet:

The quadratic adjustment feet of high-strength Trovidur © are inserted into the corner tubes and can also be used in the opposite side after removing the small knurled-head screws.

For fine adjustment of the feet use the M8 knurled screws on the underside. These adjusters can be replaced by mounting hardware for hanging attachment (eg. eyebolts).

Warning: Unscrew the adjusters only so far as is absolutely necessary! Always use the possibilities of the Trovidur © adjustment feet first.

More information about hanging STACKY can be found in chapter 3.

2) Projector Installation

STACKY is not designed as a quick-change frame but will make video projectors, which are generally simple in their construction, a permanent professional tool. The installation of projectors into **STACKY** requires some care but you will benefit through the easy use and adjustment of your video projector afterwards. If you have purchased a **ceiling- or truss mount**, install the mounting plate now as well, otherwise you will have to disassemble the projector later. More information about the installation of the mounting plate can be found in the mount manual.

Video projectors are not standardised for assembly. There are 3 - 4 thread holes of M4 - M6 on the bottom, which are arbitrarily positioned without a strict grid. Moreover, there are devices whose base is graded, so you have to compensate the differences during installation. The three sets of cross-head screws included reflect this diversity. The following installation instructions (including the specified screw lengths) refer to projectors whose thread holes have the same height. For a device with graded base the appropriate screw lengths should be chosen.
Should there be now or in future devices on the market that can not be mounted by using the screws provided, we kindly ask for feedback. We will be happy to assist you in obtaining the mounting material.

Note: If planned usage requires “stacking” (adding the light power by stacking multiple projectors), it is essential that each projector is installed identically into **STACKY.**

The **Projection axis** of the projector **should be as parallel as possible to the frame.**
Use, if possible, at least one of the holes of the perforated metal plate should be positioned centrally. You can use the supplied 15mm ring washer to centre it.
As it is often not possible to position the projector in a way that every thread hole is above one of the holes of the perforated plate of **STACKY**, some screws can be mounted off-centre instead.

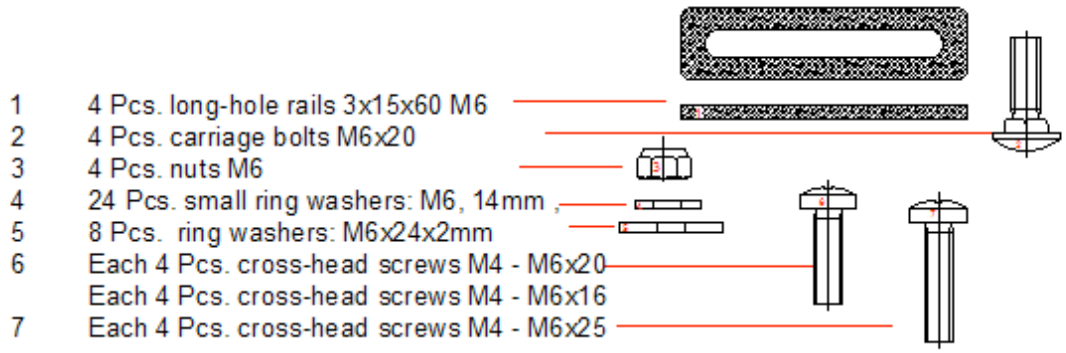
Note: Long-hole rails which are not required for the off-centre mounting can be used as large washers. They are sturdy and can be employed for subsequent reassembly.

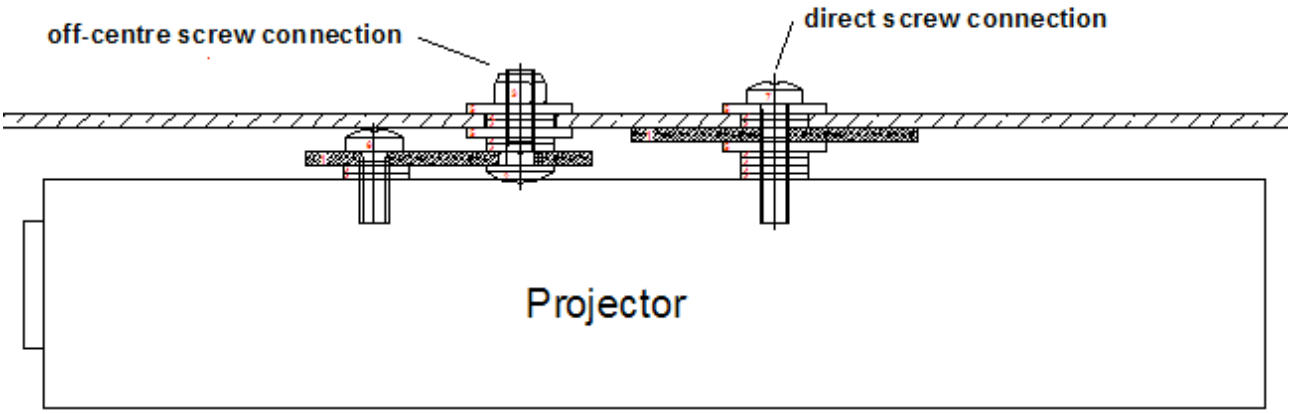
Warning: The thread holes in the bottom of projectors are often fragile! Tighten the screws firmly, but with no unnecessary force, otherwise threads could be easily stripped.

Procedure

- Place the projector upside down on a soft object or box that is high enough to place the **STACKY** on the projector.

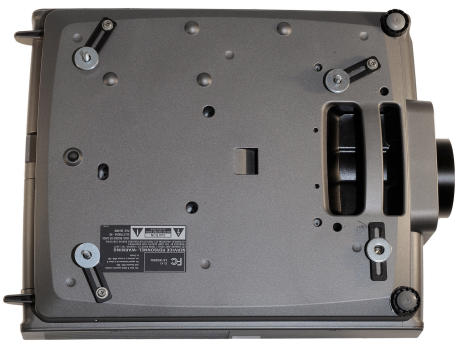
- Place the **STACKY** on the projector in the desired position: i.e;
  - projection axis parallel to **STACKY** frame;
  - wherever possible at least one screw directly into the projector (without off-centre mounting by long-head rail)
  - sufficient space to handle the knurled screws on the adjustment feet;
  - Mark the hole(s) on the perforated plate which you will use for direct screw connection(s);
- Prepare the following screw connections for the installation:


1 4 Pcs. long-hole rails 3x15x60 M6
2 4 Pcs. carriage bolts M6x20
3 4 Pcs. nuts M6
4 24 Pcs. small ring washers: M6, 14mm ,
5 8 Pcs. ring washers: M6x24x2mm
6 Each 4 Pcs. cross-head screws M4 - M6x20
Each 4 Pcs. cross-head screws M4 - M6x16
7 Each 4 Pcs. cross-head screws M4 - M6x25



- Start with the **off-centre screw connections**:
  - Keep the cross-head screws slightly loose in the projector, so that the long-hole rails can still swing, but will not change their position at every touch.
  - Find the final position for the long-hole rails by placing and removing STACKY from the projector (always pay attention to the previously marked position of the direct fitting!). The carriage bolts in the long-hole rail should be placed centrally in the holes.
    If the bottom of the projector is not flat or level, compensate the differences in height by the supplied washers and the different length of the screws.
  - Tighten the cross-head screws firmly into the long-hole rails.

- Next, mount the **direct screw connections**:
  – Put ring washers (or not used long-head rails) on the thread hole of the projector, so the same height is reached as the long-hole rails of the off-centre screw connections.
  – Place the **STACKY** carefully on the projector. Take care that the ring washers will not slip.
  – Tighten cross-head screws (25mm) and ring washers firmly (see diagram) in the projector.



- Install the carriage bolts (M6):

- Slide (if necessary by pressing for example with a knife the carriage bolts to the top) the carriage bolts through the perforated metal plate of **STACKY**. Make sure that the small ring washers (15mm) centre the screws well.
- Firmly tighten the carriage bolts using the M6 nuts and the ring washers (see diagram).
- Finally check all screw connections for a tight fit. The projector should not have any clearance in its position.
- Enjoy your ultimate projection device!

3) Adjustment of STACKY

Use as a tabletop projector:

The **STACKY** should be used with the base plate down. For quick setting of the projector, move the **STACKY** into the desired position. For most projectors the optimal position is: the lens exactly in the horizontal centre of the screen and the lower edge of the projector on a level with the lower edge of the screen. If you have to choose between an optimal horizontal or an optimal vertical position, choose the horizontal as vertical projection problems (Keystone) can compensate better than horizontal.

- Screw in the adjuster completely into adjustment feet.
- Turn the projector on.
- Rough adjustment: For quick adjustment of the adjustment feet loose the small knurled screws and place the **STACKY** into the right position. By loosening the knurled screws the feet should automatically set up on the table, drag it down by hand if necessary.
- To fix the position tighten the small knurled screws firmly.
- Vernier adjustment: Turn the adjuster until you have reached an optimum illumination of the screen.

Setting for an elevated position:

If your projector is placed on a raised platform, such as a shelf or cabinet top, it may be necessary to use the device upside down (base plate up) because many projectors aren't symmetrical in their vertical radiation (preference to the top). Proceed as follows:

- Remove the small knurled-head screws to loose the adjustment feet and then insert the feet into the opposite side of the corner tubes.
- All other steps for quick adjustment of the projector are similar to the steps in „Use as a tabletop projector" (see previous section).

Setting for a hanging position (e.g. in a truss):

STACKY offers several options for a hanging assembly. Since it is unlikely that you won´t hoist the projector inverted, the following describes the „bottom up" method, although it would be possible to hoist non-inverted.

- to optimize the installation use the **STACKY** trusses or ceiling mount which were specially designed for this purpose. If your **STACKY** is already equipped with the relevant mounting plate, you can tighten without tools in seconds (see details in the manual provide with the trusses and ceiling mount or download the manual on www.theSTACKY.de).

- If you don't have the **STACKY** trusses or ceiling mount available, you can use the M8 thread holes of the adjusters by screwing e.g. eyebolts or half-coupler (pipe clamps) in the Trovidur © – adjustment feet.

Note: Any side loading of the adjustment feet is not recommended! If you use a diagonal bracing (see illustration) a spanner should be used for fine adjustment. If the steel cables, which secure **STACKY** to the truss, follow the framework, the adjuster can be used for adjustment.

Warning: It is mandatory to use safety cables or straps to secure not only the **STACKY** but also the projector (e.g. by using a handle).

Stacking:

Increasing the brightness of a projection by simultaneous use of multiple devices is only possible if you use identical projectors. Even with identical projectors, it may be that manufacturing tolerances or inaccurate Keystone adjustability mean that the images can't be superimposed accurately. However using **STACKY** enables you to master the most difficult hurdle of stacking, the safe and accurate positioning of the projector, easily. This is done quickly and with little effort, provided that the devices were mounted in **STACKY** exactly in the same position (see section 2: Projector Installation).

Warning: If you need a wide angle or stacking devices over 6 kg, only a stacking of two projectors, is permissible because the adjustment feet could otherwise bend. If the lower projector needs a small angle (adjustment feet extended max. 10mm, adjuster max. 10mm unscrewed) you can stack up to 6 devices, provided that a total weight of 45 kg is not exceeded. But such stacks do not produce very sharp images and are only appropriate for projections with soft contours.

Stacking procedure **(below is an example using three devices):**

- First align just **one** projector as precise as possible and fix the small knurled-head screws at the adjustment feet. The adjuster (big knurled-head screws) should be unscrewed approx. 10mm, so you finally can still make a fine adjustment. The devices remain switched on for the next steps.
- Take the second **STACKY** and push the feet to the back stop. Radiate the adjuster to the dead end. Carefully place the unit on the first and turn the projector in the second **STACKY** on. Now use only the adjuster of the second **STACKY** to bring the images to cover. Turn off the projector in the second **STACKY.**
- Take the third **STACKY** and repeat the steps. If the image is congruent with that of the lower projector, secure the stack by safety straps etc. (do it with little force, otherwise you may displace the devices again!). Turn on the second Projector again and check your results. If the setting of the upper projector was correct, you can now use the adjuster of the lowest **STACKY** to adjust the entire stack.

4) Warning: Important Safety Information

STACKY is TÜV approved and is designed for safe and reliable operation. However, safe operation cannot be assured by design alone; installers, maintainers, and users must maintain safe operation environment for the system. Failure to read, thoroughly understand and follow all instructions can result in serious injury, damage to equipment and a cancellation of warranty! It is the installer's responsibility to make sure all components are properly assembled and installed using the instructions provided.

STACKY is approved for projectors up to 15 kg. The installation of projectors weighing more than 15 kg is prohibited and will result in voiding of the warranty!

It is mandatory to secure all components with weight appropriate steel cables especially when hoisting! Ensure the cables meet the adequate load capacity for the total weight (**STACKY** + Projector + mounting material). Failure to properly secure all rigging elements could result in serious injury, or even death.

Using **STACKY** to hoist other equipment is strictly forbidden!

If you use the M8 threads for rigging e.g. if you replace the knurled screws with eyebolts, it is mandatory to screw the load-bearing element (eyebolt) at least 15 mm in the quadratic adjustment feet. It is absolutely mandatory to use all 4 threads! No one-sided loads!

All rigging must be in compliance with applicable local safety regulations! Safety precautions must be observed at all times!

5) Warranty and Disclaimer

STACKY carries a 2 years warranty from invoice date against defects in material or workmanship under normal use. Defects of coating or defects caused by improper installation or improper usage or normal deterioration are explicitly not part of the warranty. This applies also to possible follow-up costs, e.g. cancellation of events, damage of equipment etc.. See our terms and conditions to find more information re. Warranty.

Marion Schmidt & André Schulz GbR intend to make this manual accurate and complete. However, we make no claim that the information contained herein covers all details, conditions or variations in connection with

the installation or usage of **STACKY.** Marion Schmidt & André Schulz GbR are not be liable for technical or editorial errors or omissions contained herein.

6) Dimensions and Weight

STACKY A: HxWxL in cm outside 16x24x34, inside 12x20x30 2 kg
STACKY B: HxWxL in cm outside 16x34x34, inside 12x30x30 2,5 kg
STACKY C: HxWxL in cm outside 22x34x49, inside 18x30x45 3 kg
STACKY D: HxWxL in cm outside 22x49x49, inside 18x45x45 4 kg
Dimensions of frame excl. feet

7) Service, spare parts

We are the exclusive distributor of **STACKY** and **STACKY** supplies (i.a. truss- and ceiling mounts). You can re-order all spare parts. Our website provides a complete list of all products, supplies and spare parts. For consultations, please don´t hesitate to contact us. For more information, please visit our website www.theSTACKY.de**.**

8) STACKY-supplies

STACKY and its accessories constitute complete integrated system. Additional elements can be added at anytime:

Truss- and ceiling mounts in different length, shelf plates, installation supplies i.a.

We are constantly expanding the range of supplies and consequently the possible applications of **STACKY**. Visit our website and find more information about our current offer on www.theSTACKY.de**.**

Congratulations on the purchase of this product. Enjoy your new STACKY !

Distribution of **STACKY** and **STACKY** – supplies (i.a. truss- and ceiling mounts):

serve-u
Buchholz & Sünderhauf GbR
Kaminer Str.7
10589 Berlin
Tel. +49(0)30 23 00 56 36
Fax +49 (0)30 23 00 56 31
E-Mail info@serve-u.de
Internet www.serve-u.de

© 2010 Marion Schmidt & André Schulz GbR , Lehrter Str.55, 10557 Berlin
Reprocution, adaptation or translation without prior written permission is prohibited, except as allowed under the copyright laws. The information contained herein is subject to change without written notice.